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EXAMINER	
HOUSHMAND, HOOMAN	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/823,414	TENE ET AL.	
	Examiner	Art Unit	
	Hooman Houshmand	2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04/12/2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 25, 32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

3. The limitation (claim 25 line 4; claim 32 line 5) "determining whether a switch is capable of stitching based on the reply" is not adequately described in the specification. "Switching capability" is not adequately described.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 3, 9, 10, 12, 14, 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. The limitation (claim 3) "*establishing a second connection between the shell VM and a core VM*" is unclear. There is no reference to a first *connection*.

7. The limitation (claim 9) "*a packet received by a core VM appears to have been sent by the shell VM*" is unclear. It is unclear what is meant by "*appears*".

8. The limitation (claim 10) "*a packet received by an external application appears to have been sent by the shell VM*" is unclear. It is unclear what is meant by "*appears*".

9. The limitation (claim 12) "*the shell VM and a core VM communicate over a separate communications link*" is unclear. It is unclear what the *link* is *separate* from.

10. The limitation (claim 14) "*the shell VM determines whether to redirect the information*" is confusing. The parent claim states "*redirecting the information to bypass the shell VM*". However, if the *shell VM determines whether to redirect the information* – then *the shell VM* has already processed the information – and there is a conflict with the aforementioned *bypassing the shell VM.*

11. Claim 28 line 2: "*the device that sent the discovery packet*" lacks antecedent basis.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claim 27 is rejected under 35 U.S.C. 102(e) as being anticipated by Dowling (US 6636499 B1).

Claim 27. Dowling discloses a method of responding to a discovery packet comprising: *receiving the discovery packet at a switch* (4:56-67 discovery protocol logic receives discovery protocol packets)*; and sending a response indicating a capability of the switch* (Fig. 2B; 4:56-67 discovery protocol logic processes, and sends discovery protocol packets to neighboring network devices on the network) (10:40-67).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. Claims 1, 3, 5, 6, 9, 12-15, 22-24, 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Galyas (US 6138020 A), in view of McGuire (US 20030097360 A1).

Claim 1. Galyas teaches a method of redirecting information*; initially sending information* (11:66-12:14 information that is being routed to mobile station) *to a machine* (11:66-12:14 first base station controller that has been communication with the mobile station)*; and redirecting the information to bypass the machine* (11:66-12:14 handover; Figures 1, 1a, 2, 2a).

Galyas does not disclose *the machine includes a virtual machine.*

In the same field of endeavor, McGuire teaches ([0050] Java virtual machine VM; FIGS. 1 and 2) *the machine includes a virtual machine - e.g. a shell VM.*

The combination of McGuire with Galyas teaches *sending information to a shell VM; and redirecting the information to bypass the shell VM.*

It would have been obvious to a person having ordinary skill in the art, at the time that the invention was made, to combine the teachings of McGuire with Galyas – thus modifying Galyas to contain *virtual machines* at various locations that the Mobile Station connects to – so that the Mobile Station runs a plurality of threads remotely.

Claim 3. Galyas does not disclose *establishing a second connection between the shell VM and a core VM.*

In the same field of endeavor, McGuire teaches *establishing a second connection between the shell VM and a core VM* ([0050] Java virtual machine VM) ([0073] information being accessed, master Java VM, client Java VM).

It would have been obvious to a person having ordinary skill in the art, at the time that the invention was made, to combine the teachings of McGuire with Galyas – thus modifying Galyas to contain *virtual machines* at various locations that the Mobile Station connects to – so that the Mobile Station runs applications remotely.

Claim 5. Galyas further teaches *redirecting includes receiving the information at a switch* (11:66-12:14 a switch in the second Base Station Controller will then stitch the

channels to the correct Base Transceiver Station, under its control and will transmit to, and from, the Mobile Station 30 after completion of the handover).

Claim 6. Galyas further teaches *the information is redirected to a machine* (11:66-12:14 handover).

Galyas does not disclose *the information is redirected to a VM.*

In the same field of endeavor, McGuire teaches ([0050] Java virtual machine) *machine is a virtual machine – e.g. a core VM.*

The combination of McGuire with Galyas discloses *the information is redirected to a core VM.*

It would have been obvious to a person having ordinary skill in the art, at the time that the invention was made, to combine the teachings of McGuire with Galyas – thus modifying Galyas to contain *virtual machines* at various locations that the Mobile Station connects to – so that the Mobile Station runs a plurality of threads.

Claim 9. Galyas further teaches *information received by one machine appears to have been sent by another machine* (11:66-12:14 first Base Station Controller, second Base Station Controller).

Galyas does not disclose *virtual machines.*

In the same field of endeavor, McGuire teaches ([0050] Java virtual machine VM) *virtual machines.*

The combination of McGuire with Galyas discloses *information received by one virtual machine appears to have been sent by another virtual machine – e.g. information received by a core virtual machine appears to have been sent by a shell virtual machine.*

It would have been obvious to a person having ordinary skill in the art, at the time that the invention was made, to combine the teachings of McGuire with Galyas – thus modifying Galyas to contain *virtual machines* at various locations that the Mobile Station connects to – so that the Mobile Station runs a plurality of threads remotely.

Claim 12. Galyas does not disclose *shell VM and a core VM communicate over a separate communications link.*

In the same field of endeavor, McGuire teaches ([0050] Java virtual machine VM) *shell VM and a core VM communicate over a separate communications link* ([0073] master Java VM, client Java VM).

It would have been obvious to a person having ordinary skill in the art, at the time that the invention was made, to combine the teachings of McGuire with Galyas – thus modifying Galyas to contain *virtual machines* at various locations that the Mobile Station connects to – so that the Mobile Station runs applications remotely.

Claim 13. Galyas further teaches *determining that the information should be redirected* (11:66-12:14 handover).

Claim 14. Galyas further teaches *a machine determines whether to redirect the information* (11:66-12:14 handover).

Galyas does not disclose *the machine includes a virtual machine.*

In the same field of endeavor, McGuire teaches ([0050] Java virtual machine VM 40 functions as a virtual operating system, supporting Java application 50, including multiple threads, T1 180 and T2 185; FIGS. 1 and 2) *the machine includes a virtual machine – e.g. a shell VM.*

The combination of McGuire with Galyas discloses *the shell VM determines whether to redirect the information.*

It would have been obvious to a person having ordinary skill in the art, at the time that the invention was made, to combine the teachings of McGuire with Galyas – thus modifying Galyas to contain *virtual machines* at various locations that the Mobile Station connects to – so that the Mobile Station runs a plurality of threads remotely.

Claim 15. Galyas further teaches *a machine determines whether to redirect the information* (11:66-12:14 handover).

Galyas does not disclose *the machine includes a virtual machine.*

In the same field of endeavor, McGuire teaches ([0050] Java virtual machine VM) *the machine includes a virtual machine – e.g. a core VM.*

The combination of McGuire with Galyas discloses *the core VM determines whether to redirect the information.*

It would have been obvious to a person having ordinary skill in the art, at the time that the invention was made, to combine the teachings of McGuire with Galyas – thus modifying Galyas to contain *virtual machines* at various locations that the Mobile Station connects to – so that the Mobile Station runs a plurality of threads remotely.

Claim 22. Galyas further teaches *a switch* (11:66-12:14 handover the switch 120) *and a machine redirects the information* (11:66-12:14 second Base Station Controller 51).

Galyas does not disclose *the machine includes a virtual machine.*

In the same field of endeavor, McGuire teaches ([0050] Java virtual machine VM) *the machine includes a virtual machine - .e.g. a core VM.*

The combination of McGuire with Galyas discloses *a device that includes a switch and a core VM redirects the information.*

It would have been obvious to a person having ordinary skill in the art, at the time that the invention was made, to combine the teachings of McGuire with Galyas – thus modifying Galyas to contain *virtual machines* at various locations that the Mobile Station connects to – so that the Mobile Station runs a plurality of threads remotely.

Claim 23. Galyas further teaches *a switch* (11:66-12:14 handover the switch 120) *and a machine redirects the information* (11:66-12:14 second Base Station Controller 51).

Galyas does not disclose *the machine includes a virtual machine.*

In the same field of endeavor, McGuire teaches ([0050] Java virtual machine) *the machine includes a virtual machine - .e.g. a shell VM.*

The combination of McGuire with Galyas discloses *a device that includes a switch and a shell VM redirects the information.*

It would have been obvious to a person having ordinary skill in the art, at the time that the invention was made, to combine the teachings of McGuire with Galyas – thus modifying Galyas to contain *virtual machines* at various locations that the Mobile Station connects to – so that the Mobile Station runs a plurality of threads remotely.

Claim 24. Galyas further teaches *a switch* (11:66-12:14 handover the switch 120) *and machines* (11:66-12:14 first Base Station Controller, second Base Station Controller 51) *redirect the information* (11:66-12:14 handover).

Galyas does not disclose *the machine includes a virtual machine.*

In the same field of endeavor, McGuire teaches ([0050] Java virtual machine VM) *the machine includes a virtual machine - .e.g. a shell or core VM.*

The combination of McGuire with Galyas discloses *a device that includes the shell VM, a core VM, and a switch redirects the information.*

It would have been obvious to a person having ordinary skill in the art, at the time that the invention was made, to combine the teachings of McGuire with Galyas – thus modifying Galyas to contain *virtual machines* at various locations that the Mobile Station connects to – so that the Mobile Station runs a plurality of threads remotely.

Claim 29. Galyas teaches a system of redirecting information*; initially sending information* (11:66-12:14 information that is being routed to mobile station) *to a machine*

(11:66-12:14 first base station controller that has been communication with the mobile station), *and a switch configured to redirect the information to bypass the machine* (11:66-12:14 handover the switch 120).

Galyas does not disclose *the machine includes a virtual machine*.

In the same field of endeavor, McGuire teaches ([0050] Java virtual machine VM) *the machine includes a virtual machine – e.g. a shell VM*.

The combination of McGuire with Galyas teaches *a device configured to send information to a shell VM; and a switch configured to redirect the information to bypass the shell VM*.

It would have been obvious to a person having ordinary skill in the art, at the time that the invention was made, to combine the teachings of McGuire with Galyas – thus modifying Galyas to contain *virtual machines* at various locations that the Mobile Station connects to – so that the Mobile Station runs a plurality of threads remotely.

15. Claims 2, 4, 7, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Galyas, in view of McGuire as applied to claim 1 above, and further in view of Williams (US 20030055877 A1).

Claim 2. Galyas does not disclose *establishing a connection between an external application and the VM*.

In the same field of endeavor, Williams teaches ([0035] external application module executing on a remote computer processor within a JAVA Virtual Machine) *establishing a connection between an external application and the VM.*

It would have been obvious to a person having ordinary skill in the art, at the time that the invention was made, to combine the teachings of Williams with Galyas – thus modifying Galyas to *connect virtual machine* at various locations that the Mobile Station connects to and *an external application* – so that the Mobile Station runs applications remotely.

Claim 4. Galyas does not disclose *establishing a first connection between an external application and the shell VM.*

In the same field of endeavor, Williams teaches ([0035] an external application module executing on a remote computer processor within a JAVA Virtual Machine) *establishing a first connection between an external application and the shell VM.*

It would have been obvious to a person having ordinary skill in the art, at the time that the invention was made, to combine the teachings of Williams with Galyas – thus modifying Galyas to *connect virtual machine* at various locations that the Mobile Station connects to and *an external application* – so that the Mobile Station runs applications remotely.

Galyas does not disclose *establishing a second connection between the shell VM and a core VM.*

In the same field of endeavor, McGuire teaches *establishing a second connection between the shell VM and a core VM:* ([0050] Java virtual machine) *the machine includes a virtual machine*, and the *virtual machines are connected* ([0073] master Java VM, client Java VM itself).

It would have been obvious to a person having ordinary skill in the art, at the time that the invention was made, to combine the teachings of McGuire with Galyas – thus modifying Galyas to contain *virtual machines* at various locations that the Mobile Station connects to – so that the Mobile Station runs applications remotely.

Galyas further teaches *stitching the first connection and the second connection* (11:66-12:14 switch, in the second Base Station Controller will then stitch the channels to the correct Base Transceiver Station, will transmit to, and from, the Mobile Station after completion of the handover).

Claim 7. Galyas further teaches *the information is redirected* (11:66-12:14 handover).

Galyas does not disclose *the information is redirected to an external application.*

In the same field of endeavor, Williams teaches ([0035] external application module executing on a remote computer processor within a JAVA Virtual Machine JVM communicates, makes a call via JAVA RMI, with application server facility to request service, application module, a JAVA servant) *an external application*.

The combination of Williams with Galyas discloses *the information is redirected to an external application*.

It would have been obvious to a person having ordinary skill in the art, at the time that the invention was made, to combine the teachings of Williams with Galyas – thus modifying Galyas to *connect virtual machine* at various locations that the Mobile Station connects to and *an external application* – so that the Mobile Station runs applications remotely.

Claim 10. Galyas further teaches *information received by one machine appears to have been sent by another machine* (11:66-12:14 handover; first Base Station Controller; second Base Station Controller r).

Galyas does not disclose *virtual machines*.

In the same field of endeavor, McGuire teaches ([0050] Java virtual machine VM functions as a virtual operating system, supporting Java application, including multiple threads; FIGS. 1 and 2) *virtual machines*.

The combination of McGuire with Galyas discloses *information received by one machine appears to have been sent by another virtual machine – e.g. information received by one machine appears to have been sent by a shell virtual machine*.

It would have been obvious to a person having ordinary skill in the art, at the time that the invention was made, to combine the teachings of McGuire with Galyas – thus modifying Galyas to contain *virtual machines* at various locations that the Mobile Station connects to – so that the Mobile Station runs a plurality of threads remotely.

Galyas does not disclose *an external application*.

In the same field of endeavor, Williams teaches ([0035] an external application module executing on a remote computer processor within a JAVA Virtual Machine JVM communicates, makes a call via JAVA RMI, with application server facility to request service) *an external application*.

The combination of Williams with Galyas discloses *information received by an external application appears to have been sent by another machine*

It would have been obvious to a person having ordinary skill in the art, at the time that the invention was made, to combine the teachings of Williams with Galyas – thus modifying Galyas to *connect virtual machine* at various locations that the Mobile Station connects to and *an external application* – so that the Mobile Station runs applications remotely.

The combination of McGuire and Williams with Galyas discloses *a packet received by an external application appears to have been sent by the shell VM*.

16. Claims 8, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Galyas, in view of McGuire as applied to claim 1 above, and further in view of Albert (US 20020141401 A1).

Claim 8. Galyas further teaches *the information is included in a connection* (11:66-12:14 transmit to, and from, the Mobile Station).

Galyas does not explicitly disclose *the information is included in a TCP packet or TCP connection.*

In the same field of endeavor, Albert discloses ([0094] client establishes a TCP connection with a virtual machine having a virtual IP address, client sends a SYN packet with a destination address corresponding to the virtual IP address, SYN packet is received by forwarding agent, forwards the SYN packet to service manager) *TCP packet or TCP connection*.

The combination of Albert with Galyas discloses *the information is included in a TCP packet or TCP connection*.

It would have been obvious to a person having ordinary skill in the art, at the time that the invention was made, to combine the teachings of Albert with Galyas – thus modifying Galyas to utilize TCP information – to distribute packets among multiple tiers of network appliances.

Claim 11. Galyas further teaches *information redirecting* (11:66-12:14 handover).

Galyas does not explicitly disclose *redirecting includes translating an address within a packet*.

In the same field of endeavor, Albert discloses ([0094] client establishes a TCP connection with a virtual machine having a virtual IP address, client sends a SYN packet with a destination address corresponding to the virtual IP address, SYN packet is received by forwarding agent, forwards the SYN packet to service manager) *translating an address within a packet*..

The combination of Albert with Galyas discloses *redirecting includes translating an address within a packet*.

It would have been obvious to a person having ordinary skill in the art, at the time that the invention was made, to combine the teachings of Albert with Galyas – thus modifying Galyas to utilize destination address information – to distribute packets among multiple tiers of network appliances.

17. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Galyas, in view of McGuire as applied to claim 1 above, and further in view of Simelius (US 20040001474 A1).

Claim 16. Galyas further teaches *the information is redirected* (11:66-12:14 handover).

Galyas does not teach *the information is redirected once a connection associated with the information lasts longer than a certain period of time.*

In the same field of endeavor, Simelius teaches ([0006] does not allow the connection to be maintained for periods longer than the time preset in the counter) *connection associated with the information lasts longer than a certain period of time.*

The combination of Simelius with Galyas discloses *the information is redirected once a connection associated with the information lasts longer than a certain period of time.*

It would have been obvious to a person having ordinary skill in the art, at the time that the invention was made, to combine the teachings of Simelius with Galyas, thus modifying Galyas to implement a time out feature, so that the system resources are not monopolized by one connection.

18. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Galyas, in view of McGuire as applied to claim 1 above, and further in view of Kaneko (US 20040193895 A1).

Claim 17. Galyas further teaches *the information is redirected* (11:66-12:14 handover).

Galyas does not teach *the information is redirected once a connection associated with the information sends more than a certain number of packets.*

In the same field of endeavor, Kaneko discloses ([0062] packet check, monitors the number of packets with a specific destination port number transmitted) *a connection associated with the information sends more than a certain number of packets.*

The combination of Kaneko with Galyas discloses *the information is redirected once a connection associated with the information sends more than a certain number of packets.*

It would have been obvious to a person having ordinary skill in the art, at the time that the invention was made, to combine the teachings of Kaneko with Galyas, thus modifying Galyas to implement a packet transmission monitoring feature, so that the system security is maintained.

19. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Galyas, in view of McGuire as applied to claim 1 above, and further in view of Coile (US 6104717 A).

Claim 18. Galyas further teaches *the information is redirected* (11:66-12:14 handover).

Galyas does not teach *the information is redirected once the shell VM device carries a certain load*.

In the same field of endeavor, Coile teaches (14:6–29 all of the physical machines can handle the traffic load for the virtual machine but the traffic load would be sufficient to overwhelm the remaining physical machines if one or more of the other physical machines failed) *VM device- .e.g. a shell VM - carries a certain load*.

The combination of Coile with Galyas discloses *the information is redirected once the shell VM device carries a certain load*.

It would have been obvious to a person having ordinary skill in the art, at the time that the invention was made, to combine the teachings of Coile with Galyas, thus modifying Galyas to implement a back up machine strategy and transfer the load beyond a particular threshold, so that the system becomes fault tolerant.

20. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Galyas, in view of McGuire as applied to claim 1 above, and further in view of Herkerdorf (US 20040146044 A1).

Claim 19. Galyas does not teach *receiving a message indicating sending has been completed; and sending a control message*.

In the same field of endeavor, Herkerdorf discloses ([0054] last data packet of one TCP session has a FIN control bit, FIG. 4, set in the TCP header, FIN message is parsed, FIG. 1, header parser sends a control signal) *receiving a message indicating sending has been completed; and sending a control message.*

It would have been obvious to a person having ordinary skill in the art, at the time that the invention was made, to combine the teachings of Herkerdorf with Galyas, thus modifying Galyas to implement a task completion algorithm, to close a connection when the communication session is over.

21. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Galyas, in view of McGuire as applied to claim 1 above, and further in view of Maturana (US 20020035681 A1).

Claim 20. Galyas does not teach *receiving a message indicating that sending has been completed; and forwarding the message.*

In the same field of endeavor, Maturana teaches ([0056] if a frame relates to TCP connection termination, the non-proxy agent will forward the frame to the server) *receiving a message indicating that sending has been completed; and forwarding the message.*

It would have been obvious to a person having ordinary skill in the art, at the time that the invention was made, to combine the teachings of Maturana with Galyas, thus

modifying Galyas to implement task completion algorithms, to close a connection when the communication session is over.

22. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Galyas, in view of McGuire as applied to claim 1 above, and further in view of Murakami (US 7203757 B2).

Claim 21. Galyas does not teach *receiving a message indicating that sending has been completed; translating the message; and sending the translated message.*

In the same field of endeavor, Murakami teaches (4:46-5:17 when receiving the packet from the client, the translation device records the FIN DATA, and sends a packet in which the SYN is set to the server, the translation device sends an ACK to the server in response to the request received together with the FIN DATA) *receiving a message indicating that sending has been completed; translating the message; and sending the translated message.*

It would have been obvious to a person having ordinary skill in the art, at the time that the invention was made, to combine the teachings of Murakami with Galyas, thus modifying Galyas to implement task completion algorithms, to close a connection when the communication session is over.

23. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chang (US 7249347 B2), in view of Banker (US 20030156552 A1).

Claim 25. Chang discloses a method of evaluating whether to redirect information comprising: *determining whether a switch is capable of stitching*.

(9:43-67 the stitching process can determine that switch port 1 is connected to host server, switch port 2 is connected to the NAS drive, and switch port 3 is connected to the SAN).

Chang does not teach *sending a discovery packet; receiving a reply to the discovery packet*.

In the same field of endeavor, Banker discloses ([0014] topology discovery messages) *sending a discovery packet; receiving a reply to the discovery packet*.

The combination of Banker with Chang teaches *sending a discovery packet; receiving a reply to the discovery packet; and determining whether a switch is capable of stitching based on the reply*.

It would have been obvious to a person having ordinary skill in the art, at the time that the invention was made, to combine the teachings of Banker with Chang – thus modifying Chang to utilize discovery packets in the stitching determination process, to automate topology discovery.

24. Claims 26, 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Galyas, in view of McGuire as applied to claim 22 above, and further in view of Lee (US 6785245 B1).

Claim 26. Galyas does not disclose *determining the number of ingress and egress points on a device.*

In the same field of endeavor, Lee teaches (8:1-12 On receipt of a graft request, the ingress node determines whether the addition of another egress point exceeds a maximum number of egress points dictated by a service level specification) *determining the number of ingress and egress points on a device.*

It would have been obvious to a person having ordinary skill in the art, at the time that the invention was made, to combine the teachings of Lee with Galyas – thus modifying Galyas to monitor the number of egress points at an ingress node – to control the number of egress points at an ingress node in a multicast tree in a differentiated services.

Claim 31. Galyas does not disclose *the machine includes a virtual machine.*

In the same field of endeavor, McGuire teaches ([0050] Java virtual machine VM functions as a virtual operating system, supporting Java application, including multiple threads; FIGS. 1 and 2) *the machine includes a virtual machine - .e.g. a core VM.*

The combination of McGuire with Galyas discloses *a device that includes a core VM.*

It would have been obvious to a person having ordinary skill in the art, at the time that the invention was made, to combine the teachings of McGuire with Galyas – thus modifying Galyas to contain *virtual machines* at various locations that the Mobile Station connects to – so that the Mobile Station runs a plurality of threads remotely.

25. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Galyas, in view of McGuire as applied to claim 24 above, and further in view of Dowling.

Claim 28. Galyas does not disclose *determining whether the switch is one hop away from the device that sent the discovery packet*.

In the same field of endeavor, Dowling teaches (13:29-65 device is downstream of a member if it is one CDP hop further away from the commander than is the member) *determining whether the switch is one hop away from the device that sent the discovery packet*.

It would have been obvious to a person having ordinary skill in the art, at the time that the invention was made, to combine the teachings of Dowling with Galyas – thus modifying Galyas to include cluster architecture detection capability – to automatically discover networks.

26. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Galyas, in view of McGuire, further in view of Lee as applied to claim 26 above, and further in view of Williams.

Claim 30. Galyas does not disclose *device includes an external application*.

In the same field of endeavor, Williams teaches ([0035] an external application module executing on a remote computer processor within a JAVA Virtual Machine JVM

communicates, makes a call via JAVA RMI, with application server facility to request service) *device includes an external application.*

It would have been obvious to a person having ordinary skill in the art, at the time that the invention was made, to combine the teachings of Williams with Galyas – thus modifying Galyas to include an external application – so that the Mobile Station runs applications remotely.

27. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chang, in view of McGuire, and further in view of Banker.

Claim 32. Chang discloses a system and a switch for evaluating whether to redirect information comprising: *a machine configured to determine whether a switch is capable of stitching*

(9:43-67 the stitching process can determine that switch port 1 is connected to host server, switch port 2 is connected to the NAS drive, and switch port 3 is connected to the SAN).

Chang does not teach *the machine includes a virtual machine.*

In the same field of endeavor, McGuire teaches ([0050] Java virtual machine VM functions as a virtual operating system, supporting Java application, including multiple threads; FIGS. 1 and 2) *the machine includes a virtual machine - e.g. a shell VM.*

It would have been obvious to a person having ordinary skill in the art, at the time that the invention was made, to combine the teachings of McGuire with Chang – thus

modifying Chang to contain *virtual machines* – so that the machine runs a plurality of threads.

Chang does not teach *sending a discovery packet; receiving a reply to the discovery packet*.

In the same field of endeavor, Banker discloses ([0014] topology discovery messages) *sending a discovery packet; receiving a reply to the discovery packet*.

It would have been obvious to a person having ordinary skill in the art, at the time that the invention was made, to combine the teachings of Banker with Chang – thus modifying Chang to utilize discovery packets in the stitching determination process, to automate topology discovery.

The combination of McGuire, Banker with Chang teaches *a shell VM configured to: send a discovery packet; receive a reply to the discovery packet; and determine whether a switch is capable of stitching based on the reply; and a switch configured to send a reply to the discovery packet*.

28. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dowling, in view of McGuire.

Claim 33. Dowling discloses a system for responding to a discovery packet, comprising: *a machine configured to send the discovery packet; and a switch configured to: receive the discovery packet; and respond with a capability of the switch* (Fig. 2B; 4:56-67

discovery protocol logic receives, processes, and sends discovery protocol packets to neighboring network devices on the network) (FIG. 13, FIG. 14; 10:40-67; 13:29-65)

Dowling does not teach *the machine includes a virtual machine*.

In the same field of endeavor, McGuire teaches ([0050] Java virtual machine VM functions as a virtual operating system, supporting Java application, including multiple threads; FIGS. 1 and 2) *the machine includes a virtual machine - e.g. a shell VM*.

It would have been obvious to a person having ordinary skill in the art, at the time that the invention was made, to combine the teachings of McGuire with Dowling – thus modifying Dowling to contain *virtual machines* – so that the machine runs a plurality of threads.

The combination of McGuire with Dowling teaches *a shell VM configured to send the discovery packet; and a switch configured to: receive the discovery packet; and respond with a capability of the switch*.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hooman Houshmand whose telephone number is (571)270-1817. The examiner can normally be reached on Monday - Friday 8am - 5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571)272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/H. H./
Examiner, Art Unit 2419

/Hassan Kizou/

Supervisory Patent Examiner, Art Unit 2419